

WHAT IS CLAIMED IS:

1. A heat-sensitive recording material comprising a support having disposed thereon a heat-sensitive recording layer including microcapsules in which an electron-donating dye precursor is encapsulated and outside which an electron-accepting compound is present, the electron-donating dye precursor being capable of reacting with the electron-accepting compound to develop color,
wherein the microcapsules comprise at least two kinds of microcapsules having different volume average particle diameters.
2. The heat-sensitive recording material according to claim 1, which comprises two or more heat-sensitive recording layers each including at least two kinds of microcapsules having different volume average particle diameters.
3. The heat-sensitive recording material according to claim 1, wherein the difference in volume average particle diameter between the at least two kinds of microcapsules is 0.3 to 0.7 μm .
4. The heat-sensitive recording material according to claim 2, wherein the difference in volume average particle diameter between the at least two kinds of microcapsules is 0.3 to 0.7 μm .
5. The heat-sensitive recording material according to claim 1, which comprises at least a heat-sensitive recording layer whose mass ratio (x/y) of a microcapsule (x) having a larger volume average particle diameter to another microcapsule (y) having a smaller volume average particle

diameter is 85/15 to 55/45 and another heat-sensitive recording layer whose mass ratio (x/y) is 20/80 to 50/50.

6. The heat-sensitive recording material according to claim 2, which comprises a heat-sensitive recording layer whose mass ratio (x/y) of a microcapsule (x) having a larger volume average particle diameter to another microcapsule (y) having a smaller volume average particle diameter is 85/15 to 55/45 and another heat-sensitive recording layer whose mass ratio (x/y) is 20/80 to 50/50.

7. The heat-sensitive recording material according to claim 1, wherein the electron-donating dye precursor is selected from the group consisting of phthalide compounds, fluoran compounds, phenothiazine compounds, leucoauramine compounds, rhodamine lactam compounds, triphenylmethane compounds, triazene compounds, spirodipyran compounds, pyridine compounds, pyrazine compounds and fluorene compounds.

8. The heat-sensitive recording material according to claim 2, wherein the electron-donating dye precursor is selected from the group consisting of phthalide compounds, fluoran compounds, phenothiazine compounds, leucoauramine compounds, rhodamine lactam compounds, triphenylmethane compounds, triazene compounds, spirodipyran compounds, pyridine compounds, pyrazine compounds and fluorene compounds.

9. The heat-sensitive recording material according to claim 1,

wherein the electron-accepting compound is selected from the group consisting of phenol derivatives, salicylic acid derivatives, metal salts of aromatic carboxylic acids, acid china clay, bentonite, novolak resin, metal-treated novolak resin, and metal complexes.

10. The heat-sensitive recording material according to claim 2, wherein the electron-accepting compound is selected from the group consisting of phenol derivatives, salicylic acid derivatives, metal salts of aromatic carboxylic acids, acid china clay, bentonite, novolak resin, metal-treated novolak resin, and metal complexes.

11. The heat-sensitive recording material according to claim 1, wherein the electron-accepting compound is contained in a ratio of 50 to 800% by mass relative to the electron-donating dye precursor.

12. The heat-sensitive recording material according to claim 2, wherein the electron-accepting compound is contained in a ratio of 50 to 800% by mass relative to the electron-donating dye precursor.

13. The heat-sensitive recording material according to claim 1, wherein the heat-sensitive recording layer further comprises at least one member selected from the group consisting of a hot-melt material, a UV absorbent, a pigment, a sensitizer, a wax, an antistatic agent, a defoaming agent, an electroconductive agent, a fluorescent dye, a surfactant and a UV absorbent precursor.

14. The heat-sensitive recording material according to claim 2,

wherein the heat-sensitive recording layer further comprises at least one member selected from the group consisting of a hot-melt material, a UV absorbent, a pigment, a sensitizer, a wax, an antistatic agent, a defoaming agent, an electroconductive agent, a fluorescent dye, a surfactant and a UV absorbent precursor.

15. The heat-sensitive recording material according to claim 1, wherein the heat-sensitive recording layer has transmittance density (Dt-max) of 3.0 at a heat energy range of 90 to 150 mJ/mm².
16. The heat-sensitive recording material according to claim 2, wherein the heat-sensitive recording layer has a transmittance density (Dt-max) of 3.0 at a heat energy range of 90 to 150 mJ/mm².
17. The heat-sensitive recording material according to claim 1, further comprising a protective layer on the heat-sensitive recording layer.
18. The heat-sensitive recording material according to claim 17, wherein the protective layer comprises a pigment selected from the group consisting of kaolin, aluminum hydroxide and amorphous silica.
19. The heat-sensitive recording material according to claim 1, wherein the support comprises polyethylene terephthalate.
20. The heat-sensitive recording material according to claim 2, wherein the support comprises polyethylene terephthalate.